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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,036	03/15/2004	Seok Dong Kang	YHK-0089.1	6860
34610	7590	08/17/2007	EXAMINER	
KED & ASSOCIATES, LLP			QUARTERMAN, KEVIN J	
P.O. Box 221200			ART UNIT	PAPER NUMBER
Chantilly, VA 20153-1200			2879	
			MAIL DATE	DELIVERY MODE
			08/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/800,036	KANG, SEOK DONG	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kevin Quarterman	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 June 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3-19,21-34 and 36-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 15-19,21-34 and 36-47 is/are allowed.
- 6) Claim(s) 1,3-6 and 12-14 is/are rejected.
- 7) Claim(s) 7-11 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 01 June 2007 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. 10/291,605.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's amendment and remarks received 01 June 2007 have been entered and overcome the objection to the title.

***Drawings***

2. The replacement-drawings were received on 01 June 2007. These drawings are acceptable.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5. Independent claim 13 has been amended to include limitations of "wherein x and y are positive integers" at the end of the claim. Applicant's original disclosure does not provide support for this amendment to the claim.

6. Therefore, claim 13 includes subject matter that is deemed **new matter**, since it was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3-5, 12, 16-17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Amemiya (US 2001/0011871).

9. Regarding independent claim 1, Figure 2 of Amemiya shows a plasma display panel comprising a transparent electrode (Xa); a metal bus (Xb''); a first light-shielding layer (Xb') formed between the transparent electrode and the metal bus electrode on each discharge cell; and a second light-shielding layer (30) formed between the adjacent discharge cells, wherein the first light-shielding layer and the second light-shielding layer are different from each other in at least one of a thickness thereof and a concentration of a pigment thereof, wherein the first light-shielding layer and the second shielding layer are connected to each other.

10. Regarding claim 3, Figure 2 of Amemiya shows a substrate (10) having the transparent electrode formed thereon, wherein the second light-shielding layer is commonly connected to the transparent electrodes formed in each of the adjacent discharge cells.

11. Regarding claim 4, Figure 2 of Amemiya shows a substrate (10) having the transparent electrode formed thereon, wherein the second light-shielding layer is electrically connected to the transparent electrodes formed in each of the adjacent discharge cells.

12. Regarding claim 5, Figure 2 of Amemiya shows the thickness of the first light-shielding layer being thinner than the thickness of the second light-shielding layer.

13. Regarding claim 12, Amemiya discloses the pigment of the first light-shielding layer comprising a conductive pigment (pg. 7, ¶ [0139]).

14. Regarding independent claim 16, Figure 2 of Amemiya shows a plasma display panel comprising a transparent electrode (Xa); a metal bus (Xb"); a first light-shielding layer (Xb') formed between the transparent electrode and the metal bus electrode on each discharge cell; and a second light-shielding layer (30) formed between the adjacent discharge cells, wherein each of the first and second light-shielding layers has a different light-shielding ratio from each other.

15. Regarding claim 17, Figure 2 of Amemiya shows the light-shielding ratio of the first light-shielding layer being lower than the light-shielding ratio of the second light-shielding layer.

16. Regarding claim 19, Figure 2 of Amemiya shows the first light-shielding layer and the second light-shielding layer being different from each other in at least one of a thickness and a pigment concentration.

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. Claims 6, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amemiya (US 2001/0011871).

19. Regarding claim 6, Amemiya teaches the limitation of claim 5 discussed earlier but fails to exemplify the thickness of the first light-shielding layer being thinner by about  $0.1\mu\text{m} \sim 2\mu\text{m}$  than the thickness of the second light-shielding layer.

20. However, Figure 2 of Amemiya shows the thickness of the first light-shielding layer ( $X_b'$ ) being thinner than the thickness of the second light-shielding layer (30).

21. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to the device of Amemiya with a first light-shielding layer being thinner by about  $0.1\mu\text{m} \sim 2\mu\text{m}$  than the thickness of the second light-shielding layer, since where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (MPEP 2144.05 II).

22. Regarding claim 14, Amemiya teaches the limitation of claim 12 discussed earlier but fails to exemplify the concentration of the pigment in the first light-shielding layer being about 60% ~ 69%.

23. It would have been obvious to one having ordinary skill in the art at the time the invention was made to the device of Amemiya with a concentration of pigment in the first light-shielding layer being about 60% ~ 69%, since where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (MPEP 2144.05 II).

24. Regarding claim 18, Amemiya teaches the limitation of claim 12 discussed earlier but fails to exemplify the light-shielding ratio of the first light-shielding layer being lower by 0.1% ~ 5% than the light-shielding ratio of the second light-shielding layer.

25. However, Figure 2 of Amemiya shows the thickness of the first light-shielding layer (Xb') being thinner the thickness of the second light-shielding layer (30), which is disclosed by applicant as one factor that determines the light-shielding ratio.

26. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to the device of Amemiya with a light-shielding ratio of the first light-shielding layer being lower by 0.1% ~ 5% than the light-shielding ratio of the second light-shielding layer, since where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation (MPEP 2144.05 II).

#### ***Allowable Subject Matter***

27. Claims 15-19, 21-34, and 36-47 are allowed.

28. Claims 7-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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29. Regarding claim 7, the prior art of record neither shows or suggests a plasma display panel comprising, in addition to other limitations of the claim, the pigment concentration of the first light-shielding layer being lower than the pigment concentration of the second light-shielding layer. Due to its dependency upon claim 7, claim 8 is also allowable.

30. Regarding claim 9, the prior art of record neither shows or suggests a plasma display panel comprising, in addition to other limitations of the claim, the pigment of the first and the second light-shielding layers being a non-conductive pigment. Due to their dependency upon claim 9, claims 10-11 are also allowable.

31. Regarding independent claim 15, the prior art of record neither shows or suggests a plasma display panel comprising, in addition to other limitations of the claim, a plurality of black layer including a first black layer formed between a portion of row electrodes and a first substrate and a second black layer formed between adjacent first electrodes, and a thickness of the first black layer is less than 50% of the thickness of the second black layer, wherein the second black layer has a same conductivity as the first black layer. Due to their dependency upon independent claim 15, claims 21-34 and 36-38 are also allowable.

32. Regarding independent claim 16, applicant has incorporated the allowable subject matter of claim 20 (now canceled) into independent claim 16. Due to their dependency upon independent claim 16, claims 17-19 are also allowable.

33. Regarding independent claim 39, the prior art of record neither shows or suggests a color plasma display panel comprising, in addition to other limitations of the

claim, a plurality of black layers including a first black layer formed between a portion of one of first electrodes and a first substrate and a second black layer formed outside of the first electrodes, and at least one portion of the first black layer has a same thickness as the second black layer. Due to their dependency upon independent claim 39, claims 40-47 are also allowable.

### ***Response to Arguments***

34. Applicant's arguments received 01 June 2007 have been fully considered but they are not persuasive.

35. In response to applicant's argument, in regards to independent claim 1, that Amemiya does not teach the first light-shielding layer and the second light-shielding layer being connected to each other, the Examiner notes that Figure 2 of Amemiya shows the first light-shielding layer (Xb') indirectly connected to the second light-shielding layer (30) via the dielectric layer (11) or via the substrate (10). Thus, the Examiner holds that Amemiya teaches the limitations of independent claim 1, as discussed earlier.

36. Applicant's arguments with respect to independent claims 15 and 39 have been fully considered and are persuasive. The rejection of independent claims 15 and 39 has been withdrawn.

### ***Conclusion***

37. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

38. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Art Unit 2879

  
7 August 2007



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